AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-174

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-174.01
ANS-174 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 174.01
>From AMSAT HQ KENSINGTON, MD.
June 23, 2019
To All RADIO AMATEURS
BID: $ANS-174.01

Candidates for the AMSAT Board of Directors Announced

The 2019 candidates, in alphabetical order by last name are:

Jerry Buxton, N0JY
Drew Glasbrenner, KO4MA
Jeff Johns, WE4B
Brennan Price, N4QX
Patrick Stoddard, WD9EWK
Paul Stoetzer, N8HM
Michelle Thompson, W5NYV

This year AMSAT membership will select four candidates to the Board of Directors. The four candidates receiving the highest number of votes will be seated as voting members of the Board of Directors. Two alternate directors will be selected based on the next highest number of votes received.

Ballots will be mailed to the AMSAT membership by July 15, 2019.

The election closes September 15, 2019.

[ANS thanks Clayton L. Coleman, W5PFG, AMSAT Secretary, for the above information]

Help Celebrate AMSAT's 50th Anniversary – Take W3ZM on the Road!

Leading up to the 2019 AMSAT 50th Anniversary Space Symposium and General Meeting, to be held in Arlington, VA, October 18 – 20, 2019, AMSAT's call sign, W3ZM, will operate from all 50 States, the District of Columbia, and Puerto Rico. Not only is this your chance to get Worked All States-Satellites under the W3ZM call sign, but, also, your chance to be a part of this historic effort.

Note: When operating outside of the "3" call area, operators will append the W3ZM call sign with "/(call area)." As an example, someone operating from Texas will use W3ZM/5; from Hawaii, W3ZM/KH6; from Alaska, W3ZM/KL7; and from Puerto Rico, W3ZM/WP4.

To make this happen – We need your help! Please volunteer to get on the air and activate your State, using AMSAT's W3ZM call sign, as well as to cover those States without an active AMSAT Member. Activations of other United States Territories (i.e. Guam, American Samoa, the U. S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands) are also welcome.

To volunteer and operate using AMSAT's W3ZM call sign, you must:

Be a current member of AMSAT
Obtain permission by emailing AMSAT VP of User Services, specifying the requested date(s) and location(s)
Submit an ADIF log of contacts made for upload to LoTW by AMSAT, as instructed in your notice of approval to use the W3ZM call sign

[ANS thanks Robert Bankston, KE4AL, AMSAT VP of User Services for the above information]

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This cubesat will be propelled solely by sunlight, to Earth orbit. LightSail 2 is scheduled to launch aboard a SpaceX Falcon Heavy on June 24, 2019, and we will attempt the first, controlled solar sail flight in Earth orbit.

LightSail 2 will ride to space aboard the Department of Defense Space Test Program-2 (STP-2) mission which will send 24 spacecraft to 3 different orbits. LightSail 2 itself will be enclosed within Prox-1, a Georgia Tech-designed spacecraft originally built to demonstrate close-encounter operations with other spacecraft. Prox-1 will deploy LightSail 2 seven days after launch.

After a few days of health and status checks, LightSail 2's four dual-sided solar panels will swing open. Roughly a day later, four metallic booms will unfurl four triangular Mylar sails from storage. The sails, which have a combined area of 32 square meters [344 square feet], will turn towards the sun for half of each orbit, giving the spacecraft a tiny push no stronger than the weight of a paperclip. For about a month after sail deployment, this continual thrust should raise LightSail 2's orbit by a measurable amount.

LightSail 2 will fly in a 24-degree inclination, 720 km, circular orbit. At latitudes of 42 degrees north it will reach a maximum elevation of 10 degrees above the horizon.

Lightsail-2 has been issued an experimental radio license WM9XPA and transmit on 437.025 MHz. A morse beacon will transmit the callsign every 45 seconds. A packet beacon will transmit AX.25, FSK 9K6 bps data.

Beacon information is available at:
http://tinyurl.com/ANS-153-Lightsail-Morse-Beacon
Documentation of the downlink telemetry data structure is posted at:
http://tinyurl.com/ANS-153-Lightsail-Telemetry

[ANS thanks the Planetary Society for the above information]

NASA Lightsail-2 PR and TV Coverage

NASA Television coverage is scheduled for an upcoming prelaunch activity and first nighttime launch of a SpaceX Falcon Heavy rocket, which will be carrying four agency technology missions to help improve future spacecraft design and performance.

The launch window for the Falcon Heavy opens at 11:30 p.m. EDT Monday, June 24, from historic Launch Complex 39A at NASA's Kennedy Space Center in Florida. The launch, as well as a live technology show, will air NASA Television and the agency's website.

SpaceX and the U.S. Department of Defense will launch two dozen satellites to space, including four NASA payloads that are part of the Space Test Program-2, managed by the U.S. Air Force Space and Missile Systems Center. The four payloads include two NASA technology demonstrations to improve how spacecraft propel and navigate, as well as two NASA science missions to help us better understand the nature of space and how it impacts technology on spacecraft and the ground.

Full NASA TV coverage is as follows: (all times EDT)

Sunday, June 23

. Noon - NASA prelaunch technology TV show from Kennedy. Subject matter experts will explain each NASA mission and answer questions.

Monday, June 24
. 9:30 p.m. - Live NASA TV coverage begins of the return to Earth of NASA astronaut Anne McClain and two other International Space Station residents, with landing scheduled at 10:48 p.m. (Public Channel)
. 11 p.m. - NASA TV launch commentary begins ahead of the targeted 11:30 p.m. launch. NASA TV will simulcast the SpaceX STP-2 webcast starting about 15 minutes before liftoff. (Media Channel)

Prelaunch and launch day coverage will include blog updates as milestones occur:
http://blogs.nasa.gov/spacex
Learn more about the NASA technologies aboard this launch:
https://www.nasa.gov/spacex

[ANS thanks NASA for the above information]

Listening to Lightsail-2 Beacon Co-passengers

Here are some of the "amateur radio in name only" beacont co-passengers on the LightSail launch Monday night. Unless otherwise noted, most are downlink-only satellites.

TBEX-A	437.485 MHz	9K6 AX.25 GMSK
TBEX-B	437.535 MHz	9K6 AX.25 GMSK
Oculus-A SR	437.200 MHz	9K6 AX.25 GMSK
CP9	437.505 MHz	9K6/19K2/38K4 AX.25 FSK
BRICSat-2	145.825 MHz	1K2/9K6 APRS digipeater
	437.975 MHz	Telemetry
PSAT-2	145.825 MHz	1K2 APRS digipeater
	28.120 up/435.350	PSK-31
Armadillo	435.525 MHz	38K4 GMSK + CW telem
Prox-1	437.345 MHz up/2.3 GHz	non-amateur downlink

Be aware that the two new APRS digipeaters, BRICSat-2 and PSAT-2 are being launched into a 28 degree inclination orbit which might limit their accessibility over many populated areas. That said Bob Bruninga WB4APR supplies the following information:

PSAT2 on 145.825 MHz with:
* APRS-to-Voice,
* DTMF-to-Voice/APRS,
* PSK31 HF up - UHF 435.350 down
* SSTV camera down on same UHF audio

And, her sister USNAP1 (APRS digi) on 145.825
Initially, only telemetry once a minute, and PSK31 every 20 secs.
Launch window begins at 1130 PM EDT (4 hour window).

http://aprs.org/psat2.html

[ANS thanks JoAnne K9JKM and Bob WB4APR for the above information]

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questions from a different perspective," Israel said. "A question from a different perspective gets people to think about it in a different sort of way."

"Never keep any good ideas to yourself, and don't worry about asking questions from a different perspective."

Dave Israel, ESC Communications Architect

To Grace McFassel, a SCaN intern who attended the talk, Israel's story was not only interesting, but inspiring. "He [has] this specific skillset that he dearly loves, and he's used that to carry himself through by finding niches where he can be useful," McFassel said. "It's a good lesson to carry forward."

To learn more about SIP or SCaN, visit NASA.gov/SCaN. To apply for internships, visit intern.nasa.gov.

The full article can be viewed at:
https://tinyurl.com/ANS174-SIP

[ANS thanks Emily Cavanagh, NASA's Goddard Space Flight Center, via their Explorations & Space Communication Website for the above information]

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DN05 Sunday morning. Specific passes to be posted on Casey’s Twitter feed https://twitter.com/KI7UNJ

Hawaii (BK29, BL20) – June 27 to July 8, 2019
Mark, N8MH will be operating a bit as N8MH/KH6 June 27-July 3 from BK29 and July 5-8 from BL20, FM and linears. Possibility of other grids once there. Watch Mark’s Twitter feed for further announcements: https://twitter.com/N8MH

mini-Route 66 Rove (DM94/95, EM05/15, EM14, EM23/24) June 28 – July 5, 2019
John, AB5SS, will be driving east from DM85 on a mini-Route 66 trip starting June 28, staying/passing through DM95/94, EM05/15, stopping in EM14 for July 2-4th, then head home thru EM24/23 on July 5th. Operating holiday-style, as family allows, posting activations to Twitter: https://twitter.com/TxRadioGeek

South Dakota (EN04, EN05) – July 2-3, 2019
Lucky for us, Mitch, AD0HJ, will be stopping at the EN04/05 gridline from July 2nd 22:37z to July 3rd 13:27z, on his way to Iowa. Mitch will working the FM Satellites (SO-50, AO-91, AO-92). Check Mitch’s Twitter feed for further announcements: https://twitter.com/AD0HJ

Iceland (HP95 IP15 IP25 IP03 HP03) – July 13-19, 2019
Adam, K0FFY, is taking his family (and his radios) to Iceland. Tentative schedule is HP95 July 13, IP13 and IP15 July 14-15, IP25 July 16, IP03 or HP93 July 17-18, and HP94 July 19. There’s a lot to see, so passes will be best effort and announced on Twitter shortly prior. https://twitter.com/K0FFY_Radio

Please submit any additions or corrections to ke4al (at) amsat.org

[ANS thanks Robert KE4AL for the above information]

ARISS News

+ 2019-06-13 11:10 UTC between Nick Hague KG5TMV using ISS callsign NA1SS and Peninsula Grammar, Melbourne, Australia Contact was telebridge via VK4KHZ. ARISS Mentor was Tony VK5ZAI.

+ 2019-06-15 10:39 UTC between Cosmonaut Oleg Konenenko using ISS callsign RSØISS and GBPOU RM "Saransk Polytechnic College", Saransk, Russia Contact was direct via R4UAB. ARISS Mentor was Sergey RV3DR.

+ 2019-06-15 18:11 UTC between Nick Hague KG5TMV using ISS callsign NA1SS and Smithsonian Air and Space – Udvar-Hazy, Chantilly, VA, USA Contact was telebridge via W6SRJ. ARISS Mentor was Dave W8AAS.

+ 2019-06-19 08:49 UTC between David St-Jacques KG5FYI using ISS callsign OR4ISS and King Island District High School, Currie, TAS, Australia Contact was telebridge via IK1SLD. ARISS Mentor was Shane VK4KHZ.

+ 2019-06-20 12:48 UTC between Nick Hague KG5TMV using ISS callsign NA1SS and Rowan Preparatory School, Claygate, United Kingdom Contact was direct via GB4RPS. ARISS Mentor was Ciaran MØXTD.

Upcoming ARISS Contact Schedule

Traverse Area District Library, Traverse City, MI, direct via W8TCM
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Nick Hague KG5TMV
Contact is go for: Fri 2019-06-28 14:02:16 UTC 25 deg
Watch for live stream at:
https://m.youtube.com/channel/UCVyQOrBooJxzLFNGiyz9i2w

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above
information]

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https://www.zazzle.com/amsat_gear

* Support AMSAT when you make purchases from Amazon! So far, AMSAT has received $3,913.29 from AmazonSmile. Search for "Radio Amateur Satellite Corporation"
https://smile.amazon.com/ref=smi_ext_twt_dshb_smi

* Volunteer for AMSAT
AMSAT relies on volunteers for nearly all of our activities. If you have an idea for how to help, please let us know, Details on volunteering can be found at
https://www.amsat.org/volunteer-for-amsat/

[ANS thanks the AMSAT office for the above information.]

Shorts From All Over

+ Richmond, BC Radio Club Field Day Article

Here is a nice article announcing Richmond (British Columbia) ARC satellite presence for Field Day:

https://tinyurl.com/ANS174-RARC

[ANS thanks Alan Campbell / Richmond News for the above information]

+ JAISAT-1 to Launch July 5

JAISAT-1, built by the Radio Amateur Society of Thailand and carrying a VHF/UHF linear transponder, is scheduled to launch on July 5, 2019 from Vostochny Cosmodrome on a Soyuz/Fregat launch vehicle.

[ANS thanks JM3LGF via Twitter for the above information]

+ New Distance Record via AO-91

News received via the South Africa Radio League's SARL Weekly News in English 2019-6-22 report that a news distance record was set via the AO-91 satellite. On Friday 21 June at 12:07 UTC Andre, ZS2BK in grid KF26SB made a FM QSO with Richard, 9G5AR in grid IJ95VN and the distance is 5243.9 km. Well done to Andre and Richard!

[ANS thanks SARL News for the above information.]

+ Congratulations AE4FH, WX4TVJ, KM4LAO & AI6V on receiving scholarships awarded by ARRL Foundation!
https://tinyurl.com/ANS174-Awards

[ANS thanks ARRL for the above information.]

+ The AMSAT Journal Editor-in-Chief Joe Kornowski KB6IGK would like to share your Filed Day Satellite setup pictures.

Please send your pictures in TIF, GIF or JPG format accompanied with a text description. Please do not embed graphics or photos in your manuscript. Please snd submissions to journal at amsat.org.

Selected photos will apear in a futire edition of The AMSAT Journal.

The AMSAT Journal reserves the right to selct materials based on suitability of content and space considerations.

[ANS thanks Joe KB6IGK for the above information.]

+ The May/June edition of The AMSAT Journal has been mailed and members should be receiving them.

In this issue:

Apogee View by Joe Spier K6WAO

AMSAT CubeSat Simulator Part 3: Failure Simulations and Troubleshooting by Alan B. Johnston KU2Y and Pat Kilroy N8PK

Tom Clark, K3IO, and the Event Horizon Telescope (EHT), By Bob McGwier

RF Generator Techniques for Space Applications by Jurgen Vanhamel ON5ADL

DM31 Activation, Organ Pipe Cactus National Monument by Patrick Stoddard WD9EWK/VA7EWK

Hamvention 2019 in pictures

To receive a copy of The AMSAT Journal join AMSAT today: https://www.amsat.org/join-amsat/

[AMSAT thanks The AMSAT Journal editorial staff for the above information.

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, AA8EM
aa8em at amsat dot org